Before The
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
Amendment of the Commission's Rules to Facilitate the Use of Cellular Telephones and Other Wireless Devices Aboard Airborne Aircraft	)	WT Docket No. 04-435

To: The Commission

REPLY COMMENTS OF QUALCOMM INCORPORATED

Paul Guckian
Senior Director, Technology
Dr. Gregory Breit
Senior Staff Engineer
QUALCOMM Incorporated
5775 Morehouse Drive
San Diego, CA 92121

Dean R. Brenner
Senior Director, Government Affairs
QUALCOMM Incorporated
2001 Pennsylvania Avenue, N.W.
Suite 650
Washington, D.C. 20006
(202) 263-0020
Attorney for QUALCOMM Incorporated

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QUALCOMM Incorporated ("QUALCOMM"), by its attorneys, hereby submits its Reply Comments in the above-captioned proceeding initiated by the Commission in its *Notice of Proposed Rulemaking*, WT Docket 04-435, released February 15, 2005 ("*NPRM*") on the issue of whether the Commission should authorize the airborne use of mobile phones and other devices.

In its Comments in this proceeding, QUALCOMM presented a summary of testing and analysis undertaken by QUALCOMM to determine the feasibility of an airborne mobile service using an on-board picocell. In the picocell concept, transmitting wireless devices on an aircraft would communicate to and from the aircraft-mounted picocell, which would in turn connect to terrestrial networks using a licensed air-to-ground link.

In these Reply Comments, QUALCOMM seeks to inform the Commission that QUALCOMM and Connexion by Boeing, a unit of the Boeing Company, are working together to test and demonstrate in-flight wireless communications aboard Connexion One, a specially equipped Boeing 737-400 aircraft. As described more specifically in the attached press release, the companies have performed a series of test flights that successfully demonstrated the simultaneous use of CDMA and GSM mobile phone technology over an on-board network with infrastructure and integration support from UTStarcom, Inc.

Passengers in the test flights were able to use BREW®-based data applications via QUALCOMM's BREW solution, with enables users to download business applications, 3D games, information and commercial applications, such as e-mail and instant messaging. Passengers also downloaded and watched video clips and made phone calls on a variety of mobile devices, including 3G mobile phones.

QUALCOMM and Connexion by Boeing have committed to continue to perform research and development supporting the feasibility of in-flight mobile telephony and to evaluate the potential for interference from multi-technology picocell networks and mobile phones to other aircraft systems and terrestrial networks. Safety is a top priority and the companies will engage in extensive research and testing to ensure there is no potential for interference with both aircraft systems and terrestrial networks. QUALCOMM will be pleased to report to the Commission on further progress with the picocell network

It is important to emphasize two aspects of the tested technology. First, data services are a key component of wireless connectivity and today's networks have evolved to include these services, as well as voice services. The same data service available on terrestrial networks will

be enabled through the use of picocell technology on board aircraft. Passengers would have in-flight access to, for example, text messaging, e-mail, web searches, games, music and multi-media downloads. Second, picocell technology provides a mechanism to allow the crew to disable voice services and only allow data services on board an aircraft.

Finally, QUALCOMM reiterates an important point made in its Comments. If the use of mobile phones and other devices on a plane via an onboard picocell results in some level of interference being radiated toward terrestrial networks, each terrestrial carrier should be permitted to decide for itself whether to accept such interference in exchange for the revenue generated from onboard service. No wireless carrier should be forced to accept an elevation of the noise floor on its network.

In this respect, QUALCOMM supports the spectrum policy views expressed by Cingular Wireless and Verizon Wireless in their Joint Comments. By reserving the right to provide airborne service to the terrestrial licensee, the Commission could indeed rely on the licensee "to determine how to balance airborne and terrestrial spectrum usage in its territory – and to reach agreement with neighboring co-channel licensees on achieving a similar balance in their territories."[1] We agree that establishment of interference levels by regulatory mandate "inevitably diminishes licensee rights and presents obstacles to technological evolution."[2] We further agree with those Commentors that argue against secondary or unlicensed operation of

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1 Joint Comments of Cingular Wireless and Verizon Wireless at 13. See also Comments of Sprint Corporation at 19-22 for an analysis of the legal right of licensees to provide service on board aircraft.

2 *Id.*

picocells.[3] Such operation is only likely to increase the likelihood of involuntary interference into the networks of spectrum licensees.

CONCLUSION

In sum, QUALCOMM is pleased to provide the Commission with this report of its successful testing, with Connexion by Boeing, of picocell technology aboard aircraft. QUALCOMM will, of course, keep the Commission informed as additional progress is made. Further, QUALCOMM urges the Commission to consider its views on the spectrum policy issues raised in this proceeding.

Dated: August 11, 2005

Respectfully submitted,

By: /s/ Veronica M. Ahern
For: Dean R. Brenner
Senior Director, Government Affairs
QUALCOMM Incorporated
2001 Pennsylvania Ave. N.W.
Suite 650
Washington, DC 20006
202-263-0020

Attachment: August 8, 2005 Press Release

[3] See, e.g., Joint Comments at 14 – 22; Sprint Comments at 19 – 22; CTIA Comments at 17.

QUALCOMM Incorporated

5775 Morehouse Drive
San Diego, CA 92121-1714
(858) 587-1121

Press Release

www.qualcomm.com

QUALCOMM and Connexion by Boeing Testing In-Flight Mobile Phone Communications

Connexion One aircraft configured with a multi-technology cabin communications system to enable Internet-connected data applications in flight

SEATTLE AND SAN DIEGO — AUGUST 08, 2005 — QUALCOMM Incorporated (Nasdaq: QCOM), pioneer and innovator of Code Division Multiple Access (CDMA) and other advanced wireless technologies, and Connexion by Boeing, a business unit of The Boeing Company (NYSE: BA), announced today that they are working together to test and demonstrate in-flight wireless communications aboard Connexion One, a specially equipped Boeing 737-400 aircraft.

The companies have performed a series of test flights that successfully demonstrated the simultaneous use of CDMA and GSM mobile phone technology over an on-board network with infrastructure and integration support from UTStarcom, Inc. (Nasdaq: UTSI). Using standard cellular communications, a small in-cabin CDMA2000 and GSM "picocell," or small cellular base station, is connected to the worldwide terrestrial network by an air-to-ground satellite link provided by the Connexion by Boeing high-speed airborne network.

Passengers on the test flight were able to use BREW®-based data applications via QUALCOMM's BREW solution. The BREW solution enables users to download business applications, 3D games, information and communication applications such as email and instant messenger wirelessly, over the air. Passengers also downloaded and watched video clips and made phone calls on a variety of mobile devices including 3G mobile phones. The data tests were conducted over CDMA2000 1X and CDMA2000 1xEV-DO and voice calls were made over CDMA2000 and GSM.

"According to an October 2004 report, CSP Associates estimates the penetration rate of mobile phones for passengers in the United States is approximately 70 percent and expected to rise to 90 percent in the next three years," said Paul Guckian, senior director of technology for QUALCOMM. "The cellphone is quickly becoming the most personal information and entertainment device today, and passengers want to make the best use of travel time by accessing business and entertainment applications while in-flight. QUALCOMM and Connexion by Boeing are cooperating to make this capability a reality"

"Connexion by Boeing is committed to providing evolutionary new wireless services that

provide passengers with additional choices for how to communicate while airborne, while also providing air carriers with a competitive edge within in the industry," said David Friedman, vice president of marketing and direct sales for Connexion by Boeing. "What makes the Connexion system so unique is its capability to provide high-speed connectivity and entertainment services with a bandwidth that can support simultaneous data activity to a large number of passengers who board commercial aircrafts every day carrying mobile phones."

QUALCOMM and Connexion by Boeing will continue to perform research and development supporting the feasibility of in-flight mobile telephony and evaluate the potential for interference from multi-technology picocell networks and mobile phones to other aircraft systems and terrestrial networks.

Safety is a top priority and it is with this in mind that QUALCOMM and Connexion by Boeing have committed to research and testing to ensure there is no potential for interference with both aircraft systems and terrestrial networks. Working in close collaboration with Boeing Commercial Airplanes, the testing, which began in May 2005, will continue through September 2005.

QUALCOMM is well positioned to continue to lead the research and development of an in-cabin wireless system that does not compromise the safety of the aircraft or the reliability of terrestrial wireless networks. QUALCOMM has worked closely with a number of aviation industry forums, such as the Radio Technical Commission for Aeronautics and World Airline Entertainment Association, and government agencies including the FCC and FAA. As a part of QUALCOMM's commitment to research on this subject, the Company provided testimony in mid-July for a Congressional hearing on cellphone use on aircraft, providing technical and research expertise highlighting the many capabilities of the mobile phone today beyond voice and the potential for both business and entertainment that mobile phone connectivity could bring to the flying public.

About Connexion by Boeing

Connexion by Boeing is, for the second year running, the recipient of the World Travel Award for World's Leading High-Speed In-flight Internet Services Provider and was recently named one of the wireless companies to watch in 2005 by IDC wireless services analysts. Through a broadband connection to an equipped aircraft, high-speed Internet, data and entertainment connectivity is delivered directly to travelers in flight. The Connexion by Boeing service is available today on flights offered by Lufthansa, SAS, Japan Airlines, ANA, Korean Air, Singapore Airlines and China Airlines. In addition, Asiana, Etihad, Austrian Airlines and El Al Israeli Airlines have announced their intent to begin offering the high-speed service in the near future. Connexion by Boeing also offers a high-speed connectivity solution for the business aviation and maritime markets. For more information, please visit www.connexionby boeing.com.

About QUALCOMM

QUALCOMM Incorporated (www.qualcomm.com) is a leader in developing and delivering innovative digital wireless communications products and services based on CDMA and other advanced technologies. Headquartered in San Diego, Calif., QUALCOMM is included in the S&P 500 Index and is a 2005 FORTUNE 500® company traded on The Nasdaq Stock Market® under the ticker symbol QCOM.

Except for the historical information contained herein, this news release contains forward-looking statements that are subject to risks and uncertainties, including the Company's ability to successfully design and have manufactured significant quantities of CDMA components on a timely and profitable basis, the extent and speed to which CDMA is deployed, change in economic conditions of the various markets the Company serves, as well as the other risks detailed from time to time in the Company's SEC reports, including the report on Form 10-K for the year ended September 26, 2004, and most recent Form 10-Q.

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QUALCOMM Contacts:
Jeremy James, Corporate Communications
Phone: 1-858-845-7333
Email: corpcomm@qualcomm.com
or
Bill Davidson, Investor Relations
Phone: 1-858-658-4813
Email: ir@qualcomm.com
or
Connexion by Boeing Contact:
Marc Birtel
Phone: 1-206-655-1572
Email: marc.r.birtel@boeing.com